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## Evolution Formation in the Structure of Urban Architecture of Traditional Neighborhood and Residential Buildings (On the Example of the City of Samarkand)

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### Abstract

This article discusses the history of the formation of traditions of residential construction in the Samarkand region from ancient times to the present, as well as the influence of the culture of the people, the history of the origin of the settlements, the uniqueness of the ancient traditions of the people on the traditions of the construction of settlements.

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The history of the emergence of neighborhoods in the historical part of Samarkand, their general characteristics, the process of organization of neighborhoods, their role in the development of the city, the neighborhoods in the environment of urban development are analyzed, and scientific conclusions are given based on them.

The historical typological development of settlements and neighborhood centers in the Central Asian urban planning system can be divided into six stages:

1. VI century BC and IV century AD (antique period);
2. VII-XIII centuries (Islamic period);
3. XIV-XV centuries (the Timurid period);
4. XVI-XIX centuries (the era of the Khans);
5. Late 19th - 20th centuries (Czarist Russia and the Soviet Union);
6. The period from 1991 to the present day (the period of independence).

At the first stage of neighborhood development, the importance of residential buildings in the planning system of the city can be highlighted. One of the main goals of this period was to form a religious outlook and apply its influence in all spheres. A vivid example of this is the archeological excavations

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of Tuproq-kala city in ancient Central Asia. The city surface consists of an equirectangular rectangle with an area of 12 hectares. The northern side of the city is separated by an inner wall. The ruler's palace, that is, the castle, is located on the northwest side. This palace consists of three parts: a hotel, a dormitory and a farm. Next to the castle, a small rectangular yard of "fire bow" performed the function of a public cultural center in addition to the political center of the city. The remaining 2/3 of the city is the construction of residences. The entire population of the city used the neighborhood center, which consisted of residential houses.

The further development of the urban planning system will be created in the area of the city districts. Dahas are composed of a large number of identical dwellings, some with open courtyards, where the community centers of the neighborhood are thought to have been located<sup>7</sup>.

In Central Asia, the second stage of the development of local urban architecture corresponds to the beginning of the "Islamic era". Arab rule greatly contributed to the development of the city's cultural-economic and urban planning system at the beginning of the Middle Ages. The right-angled city plan typical of Central Asia expanded due to the trade of craft products and residential complexes formed by the neighborhood system.

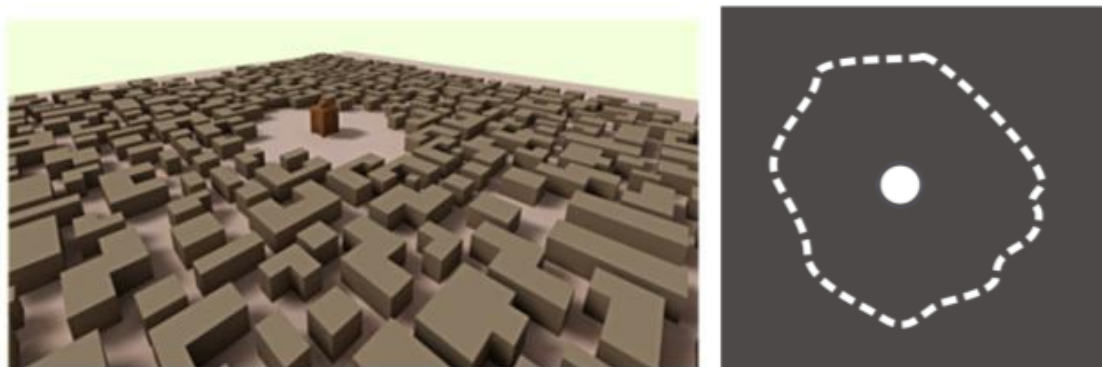
Changes in urban planning during this period were reflected in the formation of the main streets of the city, various architectural ensembles, streets, districts (Registon, Shahi Zinda, etc.).



*Figure 1.1. Sopoltepa. Graphic reconstruction of the remains of settlements and fortifications from the third construction period*

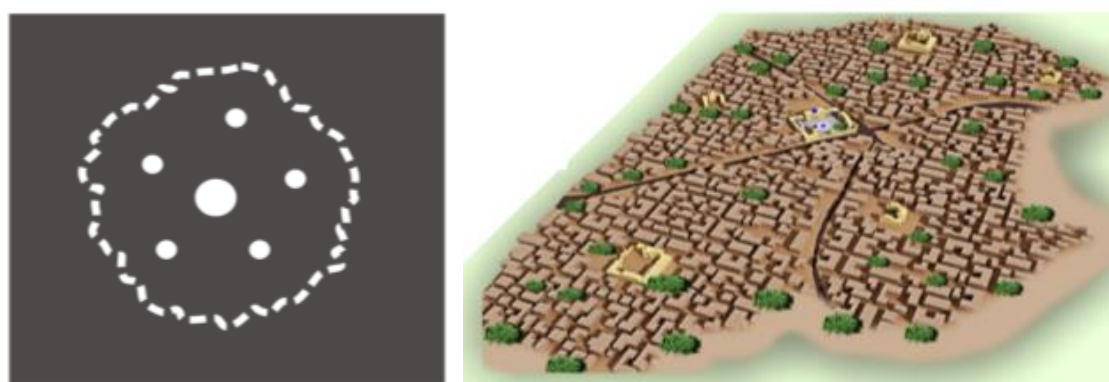
The third stage in the gradual and typological development of the architecture of the neighborhood centers corresponds to the period of the rule of the Timurids. During this period, as a result of the development of internal and external trade in the country, many public centers included shopping centers and markets and created a specific urban microstructure.

In order to increase the importance and majesty of residential buildings of the neighborhood, "pair" and "double" architectural ensemble methods are widely used in the centers. However, Amir Temur and the Timurids did not limit themselves to the construction of the ensemble, but developed the composition of the ensemble by connecting it with the main hierarchical urban planning elements. Based on the study of later periods, it can be said that during the Timurid era, residential buildings of the neighborhood reached their perfect appearance with compositional, artistic decorative, volumetric-spatial and landscape solutions.



*Figure 1.2. Antiquity - BC V-IV periods. During this period, the Central Asian urban planning system had a rectangular shape. Urban development consists of residential houses, community center – neighborhood*

The fourth stage of the development of the neighborhood and the architecture of its residential buildings corresponds to the "period of the Khans". The period of the Uzbek khanate began with the rule of the Shaibanis. Although their capital Bukhara is not equal to the capitals of the Timurid period, Samarkand and Herat, commercial buildings have been built here. At this stage, the history of the cities of Central Asia has undergone many changes, and they have survived to our time. The urban area expanded as a result of the transformation of the suburbs into cities, which in turn stimulated the development of neighborhood and neighborhood centers.

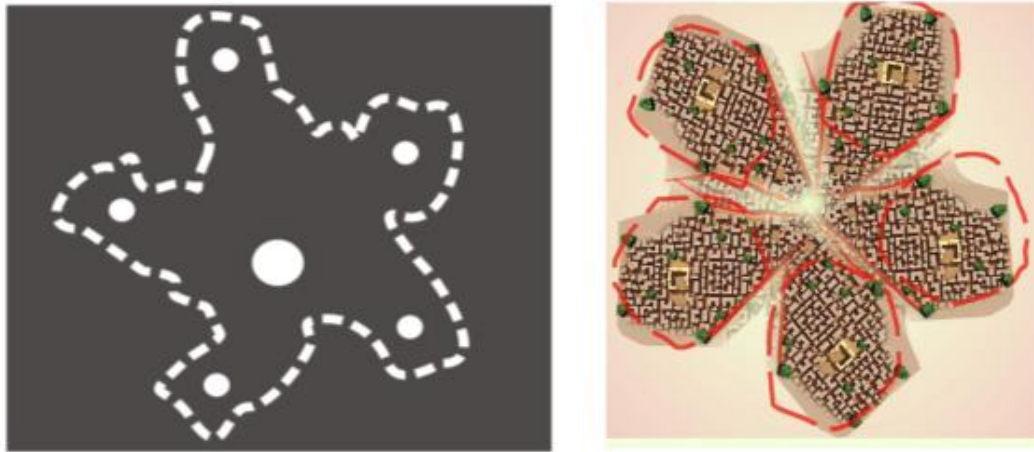


*Figure 1.3. When comparing residential houses of VII-XIII centuries (Islamic era), the following can be concluded: the neighborhood, although it kept its integrity, adopted a new construction of the planned type. The neighborhood had its own building where collective councils were held.*

The fifth stage in the development of neighborhood residential architecture corresponds to the period of inclusion of Uzbekistan into the former Soviet Union. Over time, in socio-economic changes, architectural ensembles lost their main ideological and political function. Despite this, they kept the function of a community center, but now they started to call them places where cultural and educational activities are carried out.

The nomenclature of neighborhood service facilities has changed. In particular, there was a tendency to use and renovate the tea house, which was part of the neighborhood, in the style of a club. The teahouse began to serve not only for relaxation and tea drinking, but also for "agitation" and propaganda ideas. The architecture of the medieval community center of the neighborhood has preserved its old status as a composite-territorial view in the urban planning system. But this composite-territorial ensemble was followed by the solution of the area and the renewal of the

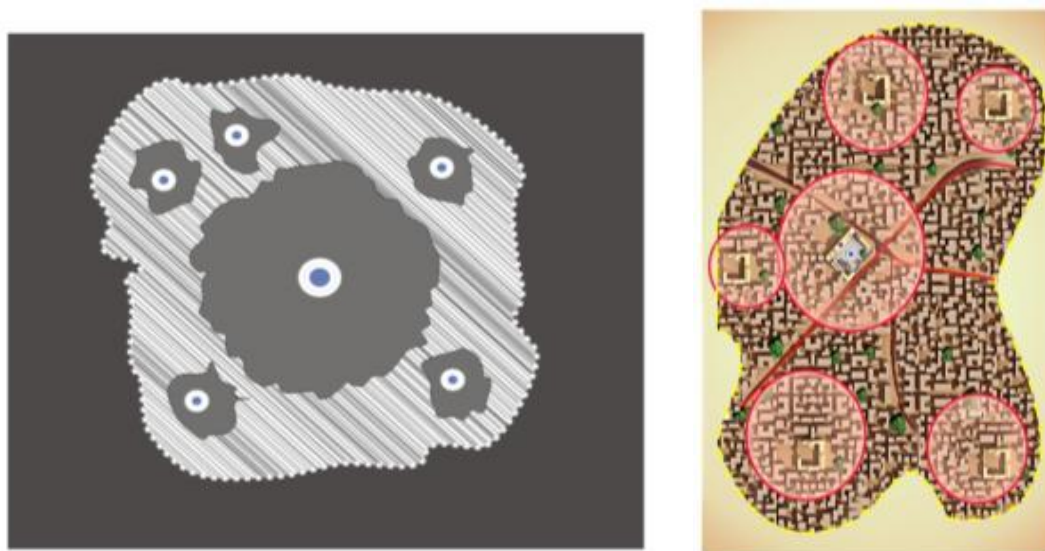
nomenclature of enterprises. Various shapes and elements of architectural construction, devices under the names of sheds, awnings, peshayvans and kayvans were formed here.



*Figure 1.5. The compositional-territorial structure during the Timurid period developed a three-level archeological structure in the medieval cities, which are: communal residential buildings, small neighborhood ensembles and memorial ensembles.*

Updates took place in the post-war years. For the first time, the community center of the neighborhood under the name of "teahouses for the elders" was created according to the architectural model project. They were used in neighborhood community center architecture as local clubs, sometimes community kitchens, and often as neighborhood mosques. Masters tried to enrich the appearance of this architectural complex with works of art. The walls and ceilings of the buildings were decorated with intricate and intricate patterns.

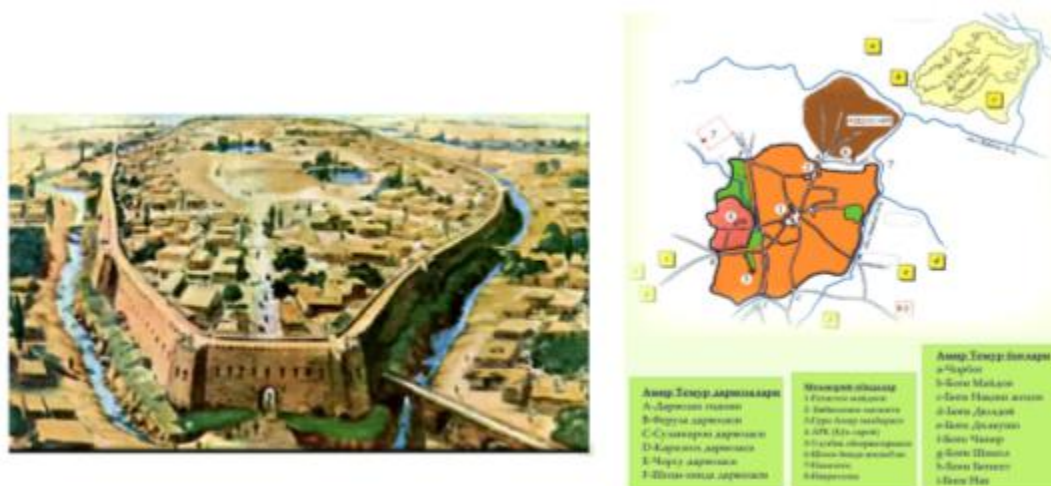
In the sixth phase in the development of neighborhood residential architecture, from 1991 to the present day, there has been a strong focus on residential and neighborhood centers, and the creation of a neighborhood community center has led to the emergence of the old traditional neighborhood system.



*Figure 1.6. Reconstruction project based on the scheme of K. D. Rakhimov*



The standard of living of the population in historical settlements and their influence on the formation of traditional neighborhood centers, as well as socio-economic factors played a significant role in the formation of the urban planning system of the historical cities of Uzbekistan. They, in turn, have a formative value in the architecture of neighborhoods, and are reflected in its structural-genetic typology, architectural-artistic appearance.



The typological characteristics of residential buildings resulted in the formation of residential types due to the influence of regional, natural climatic conditions and social origin. In its place, we can see that the embodiment of the types of residences formed neighborhoods and had a strong place in the urban planning system.

**In conclusion,** it can be said that the main conditions for the formation of neighborhoods and residential buildings were ideological, social-household and economic factors. They played a formative role in the city by helping to create a new appearance of the neighborhood and its centers, influencing the territorial growth of the city, and greatly influencing the renewal of its compositional and environmental structure.



The research conducted on determining the characteristics of the microclimate in the system of neighborhoods shows that it is appropriate to use comprehensive protection means and elements

against overheating of the air. This means that there is a direct proportional relationship between the efficiency of using elements and tools that create a microclimate environment and the size of open spaces. These items and tools include:

- demarcation of open spaces using compact devices with closed design structure and providing horizontal ventilation of the yard;
- provision of vertical ventilation and air conditioning conditions in the courtyard of the neighborhood center with shaft-like devices;
- taking into account the shading of the open spaces of the neighborhood center with the help of green gardens, wide porches, corridors and other shading devices, sheds;
- creation of "oasis zones" using traditional methods of water supply and landscaping using sprinklers, artificial waterfalls, etc.;
- using the cooling properties of the soil in placing the yard of the neighboring residential building deeper than the ground level;
- natural stone materials for floor coverings, gatehouse, paving and bathrooms, old 30x40 cm in the yard. and modern 12x24 cm. it is advisable to use bricks (brick floors do not get wet in winter, and in summer they create natural comfort when sprinkled with water), at the same time, it is advisable to adapt artificial floors to the environment;
- it is advisable to include ishkom, suri, chorpoya, seats, water pipes (tashnov), wells, sidewalks, jugs, khumdons, vases, oftoba and various other national elements as elements of the yard environment;

The landscape of the courtyard and the garden, which provides the microclimate and transparency of the building, is the main element of the residence, it is considered a natural wind and cooling, and protects it from heat. Also 80-120 cm in relation to the yard. it ensures that water does not flow under the building below and requires the construction of a wall along the perimeter of the yard. Fruit and ornamental crops are recommended in the garden.

In the history of urban development, the history of formation and development of residential and neighborhood architectural compositions was carried out in six stages: 6th century BC and 4th century AD (antique period); VII-XIII centuries (Islamic era); XIV-XV centuries (the Timurid era); 16th-19th centuries (the era of the Khans); The end of the 19th - 20th centuries (the era of Tsarist Russia and the Soviet Union); The period from 1991 to the present (era of independence).

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